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ZINC IN JANUARY 2003

Estimated domestic mine production in January, at 67,700 metric tons (t), was slightly lower than in December and about 6% higher than production in January 2002. Smelter production, at 24,900 t, was about 6% more than in December 2002 and about 32% more than a year before. Apparent U.S. consumption, at 89,100 t, was the same as in December but about 3% lower than in January 2002.

The Platts Metals Week composite price for North American Special High Grade zinc declined to 38.72 cents per pound or by about 2%; compared with January 2002, it declined by more than 1%.

According to the International Lead and Zinc Study Group, the combination of temporary and permanent mine closures during the second half of 2001 resulted in a 2% decrease in mine output in 2002, compared with the previous year, the first decline since 1993. Possible significant concentrate shortage has been averted by the coming on stream of the Antamina Mine in Peru and the Francisco Mine in Mexico. Despite a number of predominantly temporary production cuts, world output of zinc metal increased by 2% in 2002. The largest increases were recorded by Canada, the Republic of Korea, and Spain. Prices on the London Metal Exchange averaged $779 per metric ton during 2002, a fall of 12% compared with the average price in 2001 (International Lead and Zinc Study Group, 2003).

Falconbridge Ltd. of Canada is to close its zinc smelter in Timmins, Ontario, for 8 weeks this summer owing to an inadequate supply of concentrates. The company hopes that the shut down will offset the feed shortfall for 2003 and allow the smelter to build up inventories and operate into 2004. Additional reasons for the extended maintenance and summer shut down period, according to Falconbridge, include the combination of low revenue from treatment charges and metal premiums, high operating costs, and low metal prices (Metal-Pages, 2003b§[1]).

As the time for treatment charge negotiations for this year's annual contracts with European smelters is approaching, uncertainty over the future of Avonmouth and Noyelles-Godault smelters is complicating these negotiations. The doubtful future of the Noyelles-Godault smelter in France began after Metaleurop SA backtracked on its plans to convert the smelter into a dedicated recycling facility. The fate of the Avonmouth smelter in the United Kingdom should be decided no later than March 13 when consultation between the company and trade union representatives should be completed. Since the only potential buyer—Marco International—is no longer interested in buying Avonmouth, closure of the smelter is unavoidable. The closure of these two smelters would strengthen the position of the remaining European smelters who are asking for treatment charges of about $150 while miners are hoping to settle in the mid-$140s, based on $1,000 per ton of zinc metal (CRU International Ltd., 2003b).

Industrias Peñoles S.A. de C.V. of Mexico is to close its El Monte zinc-lead mine in Hidalgo state on March 1. The mine's reserves are running low, and because of low zinc prices, the mine is no longer profitable. The mine accounted for less than 1.2% of the company's total revenues. Since all zinc concentrates from the mine in recent years have been exported, the closure will not affect the company's zinc metal production (Metal-Pages, 2003e§).

Increased production at the Antamina Mine was the main reason that Peruvian zinc production for 2002 increased by 15.6% to 1.2 million metric tons (Mt) compared with 2001. For the year, Antamina produced 260,000 t of zinc, a 228% increase compared with 2001 when the mine began operation. Peru's largest zinc miner, Compañía Minera Volcán S.A., produced 276,000 t of zinc in concentrate, a 13% drop compared with the previous year (CRU International Ltd., 2003a). Because of the declining output, Volcán has decided to temporarily suspend operations at one of its three processing facilities—the 2,000-metric-ton-per-day plant at Mahr Tunel (Metal-Pages, 2003g§).

Consolidated Broken Hill Ltd. of Australia has completed negotiations for the purchase of Pasminco Ltd.'s Elura zinc-lead-silver mine in New South Wales. The negotiations between the companies extended beyond the end of January deadline, but concluded before Broken Hill's exclusive

[1]References that include a section twist (§) are found in the Internet References Cited section.

negotiating right expired on February 14 (Mining Journal, 2003). The Elura Mine is currently producing between 1.1 Mt and 1.2 Mt of ore per year with a metal in concentrate output of about 73,000 t of zinc, 42,000 t of lead, and 27 t of silver (Metal-Pages, 2003a§).

Taiwan zinc importers are experiencing delayed shipments from China, as the world's largest exporter is coping with declining ore production, increased domestic consumption of zinc metal, and inevitable lower exports. Unreliability of Chinese exports, which supplies about one-half of the country's annual consumption, is forcing the Taiwanese importers to explore other suppliers, such as Australia and Japan, to supplement imports from China (Metal-Pages, 2003f§).

China produced 2.08 Mt of zinc metal in 2002, 20,000 t less than during the previous year. Production of zinc concentrate was about 1.57 Mt, down by about 120,000 t compared with 2001. Imports of zinc metal increased by 50,000 t, while exports declined by 80,000 t. The decrease in metal production, which amounted to 420,000 t during the past two years, was mainly caused by reduced production by the state-owned companies. This trend of capacity reductions, or outright closures, may continue in 2003, as regions lacking locally produced concentrate and inexpensive energy sources are forced to curtail or stop production entirely. At the same time as the Chinese Government is closing small, inefficient plants, consumption of zinc metal is increasing at an annual rate of about 12% and should reach 1.5 Mt by 2005. By that year, zinc production should be over 2.2 Mt, owing to expansion of large-scale enterprises and construction of new and more efficient plants. Production of zinc concentrate, however, will probably lag behind smelter expansion, necessitating increased imports of concentrate, which could reach 0.5 Mt by 2005 (Antaike, 2003).

Update

MIM Holdings Ltd. of Australia announced the closing of the Avonmouth smelter in the United Kingdom. The closure decision was put forward to the trade unions by MIM's wholly owned subsidiary, Britania Zinc Ltd., last December, with the provision of a 90-day consultation period to allow alternatives to closure to be explored. The announcement of the closure on February 18 followed a vote by 80% of the workforce to end the consultation period after it became apparent that no viable alternative existed. Consequently, the furnaces will be turned off immediately, and in 15 days, when the furnaces sufficiently cool down, contractors will start dismantling them. The closure of Avonmouth will complete MIM's exit from European zinc smelting, the plant at Duisburg in Germany having been sold in December 2001 (Metal-Pages, 2003c§). The Avonmouth smelter began the Imperial Smelting Process (ISP) revolution that in the 1950s was hailed as a technological breakthrough for smelting lead-zinc bulk concentrates. The process was developed by the Imperial Smelting Corp. with the United Kingdom Government's encouragement during World War I to ease dependence on imported zinc from Belgium and Germany. A unique feature of the ISP is its ability to recover lead and zinc simultaneously from bulk concentrates which are difficult and expensive to separate. An additional advantage was its ability to accept large quantities of recycled material. The main disadvantage of the ISP was the low grade of the recovered zinc, which often had to be further refined. As the demand for high grade zinc became widespread, the electrolytic process replaced the ISP as the zinc smelting technology of choice for many companies (Metal Bulletin, 2003).

Kagara Zinc Ltd. of Australia has announced that it has completed the construction of its Mount Garnet mining complex in eastern Australia and will send its first shipment of zinc concentrate to Korea Zinc Co. Ltd.'s smelter in Australia in March 2003. Kagara aims to produce about 35,000 t of zinc in concentrate. Sun Metals Ltd. (Korea Zinc's Australian subsidiary) has signed an agreement to purchase all of Kagara's production for the next 11 years. Full production is expected to be reached by June, with concentrate shipped to Sun Metal's Townswille smelter, 500 kilometers away, beginning in March of this year (Metal-Pages, 2003d§).

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TABLE 1
SALIENT ZINC STATISTICS 1/

(Metric tons, unless otherwise specified)

	2002			2003
	January-December	November	December	January
Production:				
Mine, zinc content of concentrate	784,000 r/	63,700 r/	68,000 r/	67,700
Mine, recoverable zinc	754,000	61,300	64,700	64,000
Smelter, refined zinc	259,000	21,800	23,500	24,900
Consumption:				
Refined zinc, reported	415,000	32,700 r/	33,300 r/	33,400
Ores e/ (zinc content)	727	61	61	61
Zinc-base scrap e/ (zinc content)	189,000	15,900	15,900	15,900
Copper-base scrap e/ (zinc content)	176,000	14,700	14,700	14,700
Aluminum- and magnesium-base scrap e/ (zinc content)	1,430	120	120	120
Total e/	783,000	63,500	64,100	64,100
Apparent consumption, metal 2/	1,150,000	90,500	89,100	89,100 3/
Stocks of refined (slab) zinc, end of period:				
Producer 4/	XX	7,970	8,550	11,900
Consumer 5/	XX	57,400	59,100	59,200
Merchant	XX	11,300	9,970	11,600
Total	XX	76,700	77,600	82,600
Shipments of zinc metal from Government stockpile	5,040	--	--	516
Imports for consumption:				
Refined (slab) zinc	874,000	66,500	68,800	NA
Oxide (gross weight)	69,700	5,450	5,700	NA
Ore and concentrate (zinc content)	122,000	12,500	23,100	NA
Exports:				
Refined (slab) zinc	1,160	31	98	NA
Oxide (gross weight)	10,800	969	922	NA
Ore and concentrate (zinc content)	822,000	15,000	22,500	NA
Waste and scrap (gross weight)	47,700	4,230	4,280	NA
Price:				
London Metal Exchange, average, dollars per metric ton	$778.38	$764.91	$797.36	$781.01
Platts Metals Week North American Special High Grade, average, cents per pound	38.64	38.09	39.69	38.72

e/ Estimated. r/ Revised. NA Not available. XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; except prices; may not add to totals shown.

2/ Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

3/ Data based on reported consumption, stocks, and estimated trade data.

4/ Data from U.S. Geological Survey and American Bureau of Metal Statistics.

5/ Includes an estimate for companies that report annually.

TABLE 2
REFINED ZINC PRODUCED IN THE UNITED STATES 1/

(Metric tons)

Month	Beginning stocks 2/	Production	Shipments	Ending stocks 2/
2002:				
January	7,380	24,600	21,200	10,800
February	10,800	25,600	25,400	11,000
March	11,000	22,700	24,000	9,760
April	9,760	23,400	23,800	9,420
May	9,420	23,900	25,800	7,470
June	7,470	23,700	24,500	6,670
July	6,670	19,100	18,900	6,830
August	6,830	16,200	16,000	7,010
September	7,010	17,900	17,400	7,470
October	7,470	16,100	16,600	7,020
November	7,020	21,800	20,800	7,970
December	7,970	23,500	22,900	8,550
January-December	XX	259,000	257,000	XX
2003:				
January	8,550	24,900	21,500	11,900

XX Not applicable.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes stocks held at locations other than smelters.

Sources: U.S. Geological Survey and American Bureau of Metal Statistics.

TABLE 3
APPARENT CONSUMPTION OF REFINED ZINC ACCORDING TO INDUSTRY USE AND PRODUCT 1/

(Metric tons)

Industry and product	2002 January-December	2002 November	2002 December	2003 January 2/
Galvanizing:				
Sheet and strip	477,000	37,400 r/	38,400	37,800
Other	175,000	13,400 r/	12,900	12,900
Total	652,000	50,800 r/	51,300	50,600
Brass and bronze	189,000	15,000	14,000	14,300
Zinc-base alloy	233,000	19,700 r/	19,200	19,200
Other uses 3/	71,700	5,000 r/	4,600	5,000
Grand total	1,150,000	90,500 r/	89,100	89,100

r/ Revised.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Data based on reported consumption, stocks and estimated trade data.
3/ Includes zinc used in making zinc dust, desilvering lead, powder, alloys, anodes, chemicals, castings, light metal alloys, rolled zinc, and miscellaneous uses not elsewhere specified.

TABLE 4
AVERAGE MONTHLY ZINC PRICES 1/

Period	North American ¢/lb.	LME cash ¢/lb.	LME cash $/t
2002:			
January	39.23	35.96	792.86
February	38.23	34.97	770.86
March	40.30	37.15	818.96
April	39.89	36.64	807.80
May	38.16	34.89	769.19
June	38.04	34.78	766.75
July	39.30	36.04	794.45
August	37.27	33.89	747.24
September	37.81	34.29	755.88
October	37.71	34.21	754.30
November	38.09	34.70	764.91
December	39.69	36.17	797.36
January-December	38.64	35.31	778.38
2003:			
January	38.72	35.43	781.01

1/ Special High Grade.

Source: Platts Metals Week.

TABLE 5
U.S. EXPORTS OF ZINC 1/

Material	2001 Quantity (metric tons)	2001 Value (thousands)	2002 2/ December Quantity (metric tons)	2002 2/ December Value (thousands)	2002 2/ Year to date Quantity (metric tons)	2002 2/ Year to date Value (thousands)
Refined (slab) zinc	1,180	$1,290	98	$167	1,160	$1,210
Ore and concentrate (zinc content)	696,000	285,000	22,500	4,500	822,000	322,000
Waste and scrap (gross weight)	44,000	22,800	4,280	1,950	47,700	23,000
Powders, flakes, dust (zinc content)	4,690	7,230	941	1,130	5,660	8,120
Oxide (gross weight)	11,300	17,600	922	1,170	10,800	14,600
Chloride (gross weight)	1,730	1,630	252	151	1,950	1,930
Sulfate (gross weight)	4,780	2,900	152	83	2,900	1,760
Compounds, other (gross weight)	227	499	25	107	217	600

1/ Data are rounded to no more than three significant digits.
2/ Data for January 2003 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF ZINC 1/

Material	2001		2002 2/			
			December		Year to date	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	813,000	$773,000	68,800	$56,500	874,000	$716,000
Ore and concentrate (zinc content)	84,000	31,600	23,100	8,100	122,000	44,600
Waste and scrap (gross weight)	39,300	11,600	3,780	918	31,200	9,530
Powders, flakes, dust (zinc content)	26,700	45,000	2,220	3,020	30,900	47,800
Oxide (gross weight)	72,000	66,200	5,700	4,680	69,700	57,600
Chloride (gross weight)	946	1,020	40	73	716	775
Sulfate (gross weight)	16,200	7,330	2,470	1,220	20,100	10,300
Compounds, other (gross weight)	1,400	1,360	104	130	1,030	1,180

1/ Data are rounded to no more than three significant digits.
2/ Data for January 2003 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 7
SHIPMENTS OF ZINC METAL FROM THE NATIONAL DEFENSE STOCKPILE 1/

(Metric tons)

Period	Beginning inventory	Shipments	Ending inventory
2002:			
January	114,000	220	114,000
February	114,000	--	114,000
March	114,000	202	113,000
April	113,000	197	113,000
May	113,000	1,220	112,000
June	112,000	741	111,000
July	111,000	890	110,000
August	110,000	445	110,000
September	110,000	--	110,000
October	110,000	1,130	109,000
November	109,000	--	109,000
December	109,000	--	109,000
January-December	XX	5,040	XX
2003:			
January	109,000	516	108,000

XX Not applicable. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Defense Logistics Agency.

TABLE 8
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY 1/ 2/

(Metric tons)

Material and country	General imports			Imports for consumption		
		2002 2/			2002 2/	
	2001	December	Year to date	2001	December	Year to date
Ore and concentrate (zinc content):						
Australia	17,200	5,310	41,800	17,200	5,310	41,800
Mexico	10,700	--	12,700	10,700	--	12,700
Peru	54,900	17,800	61,100	54,900	17,800	61,100
Other	1,150	--	6,690	1,150	--	6,690
Total	84,000	23,100	122,000	84,000	23,100	122,000
Blocks, pigs, or slab:						
Australia	55,700	--	35,000	29,600	--	21,000
Brazil	17,900	7,670	30,200	17,900	7,670	30,200
Canada	442,000	46,800	523,000	438,000	46,800	523,000
Chile	--	1,500	5,250	--	--	--
China	31,800	10	39,700	7,260	10	1,040
Japan	7,280	--	10,500	274	--	--
Kazakhstan	88,900	--	93,200	88,900	--	93,200
Korea, Republic of	30,600	3,000	76,200	10,800	--	2,480
Mexico	141,000	11,300	136,000	140,000	11,300	136,000
Peru	48,800	592	36,000	47,600	918	34,300
Poland	8,530	1,600	9,340	8,530	1,600	9,340
Russia	14,400	--	10,700	14,400	--	10,700
Other	16,100	509	19,900	10,100	508	13,100
Total	903,000	73,000	1,020,000	813,000	68,800	874,000
Dross, ashes, fume (zinc content)	12,000	1,300	15,500	12,000	1,300	15,500
Grand total	999,000	97,400	1,160,000	909,000	93,300	1,010,000
Oxide (gross weight):						
Canada	47,500	3,350	44,800	47,500	3,350	44,800
China	227	--	838	227	--	838
Japan	1,110	95	869	1,110	95	869
Mexico	18,900	1,850	19,900	18,900	1,850	19,900
Netherlands	2,820	335	2,640	2,820	335	2,640
Other	1,390	61	760	1,390	61	760
Total	72,000	5,700	69,700	72,000	5,700	69,700
Other (gross weight):						
Waste and scrap	39,300	3,780	31,200	39,300	3,780	31,200
Sheets	7,240	173	1,640	7,240	173	1,640
Powders, flakes, dust (zinc content)	26,700	2,220	30,900	26,700	2,220	30,900

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Data for January 2003 were not available at time of publication.

Source: U.S. Census Bureau.